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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,616	02/05/2004	H. Steven Bissonnette	25.0246	5077

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EXAMINER	
COY, NICOLE A	

ART UNIT	PAPER NUMBER
3672	

DATE MAILED: 01/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/772,616	BISSONNETTE ET AL.	
	Examiner	Art Unit	
	Nicole Coy	3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 February 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "annular valve seat" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 4-16, 19-21, and 24-31 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Baker (USP 2,878,877).

Baker discloses a by-pass valve mechanism for a well treatment tool having at least one packer element for sealing within the well casing of a well, permitting by-pass of well fluid past the packer element of the well treatment tool during conveyance of the well treatment tool within the well casing, comprising: a by-pass valve housing (see figure 1) being connected with a well tool (see figure 1) and defining an internal flow passage in communication with a tubing string (see figure 1) and at least one by-pass port (110) establishing communication of the internal flow passage with an annulus between said by-pass valve housing and the well casing (see figure 1); a valve element (84) being moveable within said by-pass valve housing between an open position permitting flow of well fluid through said at least one by-pass port and a closed position blocking the flow of well fluid through said at least one by-pass port (see figures 1 and 4 and column 6 lines 47-72); at least one retainer (122) securing said valve element (84) at said open position permitting fluid by-pass during tool running and releasing said valve element for closing movement responsive to predetermined fluid pressure (see

In the alternative, if the valve closes mechanically, it is well known in the art to close a valve in response to a predetermined fluid pressure.

With respect to claim 4, Baker discloses a by-pass valve housing defining an annular valve seat (114); and said valve element (84) being a tubular sleeve valve element (see figures 1 and 4) located at least partially within said annular valve receptacle and defining a valve member (see figures 1 and 4), said tubular sleeve valve element being linearly moveable from an open position with said valve member retracted from said annular valve seat and permitting fluid flow through said at least one by-pass port (see figure 4) and a closed position with said tubular valve portion establishing sealed engagement with said annular valve seat and blocking fluid flow through said at least one by-pass port (see figure 1).

With respect to claim 5, Baker discloses a by-pass valve housing defining an internal housing sealing surface (125) having a defined internal diameter (see figure 1); said annular valve seat (114) having an internal seat surface having a diameter less than said defined internal diameter (see figure 1); and said tubular valve portion having a middle seal of a diameter establishing sealing engagement only with said internal housing sealing surface and having a lower seal of a diameter establishing sealing engagement only with said internal seat surface (see figure 1 numeral 125).

With respect to claim 6, Baker discloses an internal housing sealing surface (125) and said internal seat surface each being of cylindrical configuration and being of differing diameters (see figure 1).

With respect to claim 7, Baker discloses a by-pass valve housing defining a valve receptacle (see figure 1) and an annular valve seat (114); and said valve element (84) being a tubular sleeve valve element (see figure 1) located at least partially within said annular valve receptacle and defining a circular valve member (see figure 1), said tubular sleeve valve element being linearly moveable within said valve receptacle from an open position with said valve member retracted from said annular valve seat and permitting fluid flow through said at least one by-pass port (110) and a closed position with said tubular valve portion located within said valve receptacle and establishing sealed engagement with said annular valve seat and blocking fluid flow through said at least one by-pass port (see figures 1 and 4).

With respect to claim 8, Baker discloses a by-pass valve housing defining a piston sealing surface (see figure 1); said valve element (84) being a sleeve valve element having an annular piston seal disposed in sealing engagement with said piston sealing surface and defining a pressure responsive area (see figure 1); and fluid pressure within said flow passage acting on said pressure responsive area and developing a resultant force urging said sleeve valve element toward said closed position thereof (see column 1 lines 42-49 and column 8 lines 43-46, wherein the anchor is responsive to fluid pressure, which in turn closes the valve port 110).

With respect to claim 9, Baker discloses a valve element (84) being a tubular sleeve valve element defining at least one hydraulic area (see figure 1); and fluid pressure within said flow passage acting on said at least one hydraulic area and maintaining said tubular sleeve valve element at said closed position one valve closure

has occurred (see column 1 lines 42-49 and column 8 lines 43-46, wherein the anchor is responsive to fluid pressure, which in turn closes the valve port 110).

With respect to claim 10, Baker discloses at least one retainer (122) being at least one shear element retaining said valve element at said open position thereof (see figure 4) and shearing responsive to predetermined force on said valve element and releasing said valve element for pressure responsive closing movement (see column 1 lines 42-49 and column 8 lines 43-46, wherein the anchor is responsive to fluid pressure, which in turn closes the valve port 110).

With respect to claim 11, Baker discloses a by-pass valve housing (see figure 1) having upper and lower housing subs being releasably connected and defining an annular chamber having a generally cylindrical piston sealing surface (see figure 1); said valve element being a sleeve valve member having an annular piston seal (112) disposed in sealing engagement with said piston sealing surface (see figure 1); and an upper seal element (107) and a middle seal element (108) establishing sealing between said sleeve valve element and said upper and lower housing subs on opposing sides of said annular piston seal and being of substantially equal sealing diameter (see figure 1).

With respect to claim 12, Baker discloses an annular piston seal (112) engaging said generally cylindrical piston sealing surface defining a hydraulic area of said sleeve valve element (see figure 1); and at least one pressure port (110) being defined in said by-pass valve housing and communicating annulus pressure externally of said by-pass valve housing to said hydraulic area of said sleeve valve element (see figure 1) and developing a pressure responsive force urging said sleeve valve element toward said

closed position thereof (wherein pressure responsive force would inherently urge the sleeve valve element toward said closed position).

With respect to claim 13, Baker discloses a by-pass valve housing defining an internal sleeve valve recess (see figure 4); said valve element being a tubular sleeve valve member moveable within said internal sleeve valve recess between said open and closed positions (see figures 1 and 2); and a tubular erosion sleeve element being located within said by-pass valve housing and having a portion thereof extending within said sleeve valve member (see figures 1 and 4) and defining a protective internal covering minimizing the development of turbulence within said by-pass valve housing by-pass valve housing and minimizing fluid flow erosion of said sleeve valve element and said sleeve valve recess (wherein the tubular erosion sleeve would inherently define a protective internal covering minimizing the development of turbulence and fluid flow erosion).

With respect to claim 14, Baker discloses a valve element being a tubular sleeve valve member moveable within said by-pass valve housing during closing movement thereof, said tubular sleeve valve member defining a locking recess (see figure 1); and a lock member located within said by-pass valve housing and being moveable into said locking recess upon closure of said tubular sleeve valve member and securing said tubular sleeve valve member at said closed position (see figure 1 numeral 122).

With respect to claim 15, Baker discloses a method for by-passing well fluid past a packer element of a well treatment tool having a treatment fluid passage during conveyance of the well treatment tool within the well casing, comprising: connecting a

by-pass valve mechanism to the well treatment tool (see figure 1), said by-pass valve mechanism having a by-pass valve body defining a flow passage being in communication with said treatment fluid passage and having at least one by-pass port (110) for communicating said flow passage with an annulus between the well treatment tool and the well casing (see figures 1 and 4), said by-pass valve mechanism having a valve element (84) being moveable within said by-pass valve housing between an open position (see figure 4) permitting by-pass flow of well fluid through said at least one by-pass port (110) and a closed position (see figure 1) blocking by-pass flow of well fluid through said at least one by-pass port (110); connecting said by-pass valve body with a string of conveyance and treatment fluid supply tubing (see figure 1); retaining said valve element at said open position during running of said well treatment tool and by-pass valve mechanism and permitting by-pass of fluid between said treatment fluid passage and said annulus (see figure 1 and column 10 lines 38-42); releasing said valve element from said open position responsive to fluid pressure (see column 1 lines 42-49 and column 8 lines 43-46, wherein the anchor is responsive to fluid pressure, which in turn closes the valve port 110); and causing pressure responsive movement of said by-pass valve element from said open position to said closed position (see column 1 lines 42-49 and column 8 lines 43-46, wherein the anchor is responsive to fluid pressure, which in turn closes the valve port 110).

In the alternative, if the valve closes mechanically, it is well known in the art to close a valve in response to a predetermined fluid pressure.

With respect to claim 16, Baker discloses that upon closing of said valve element, retaining said valve element at said closed position (see figure 1).

With respect to claim 19, Baker discloses that at least one shear element (122) retains said valve element at said open position (see figure 4) and said valve element is sealed to said by-pass valve body and defines a piston area (112), said method comprising: said releasing step being applying sufficient pressure responsive force to said piston area to shear said at least one shear element and release said valve element from said by-pass valve body (see column 1 lines 42-49 and column 8 lines 43-46, wherein the anchor is responsive to fluid pressure, which in turn closes the valve port 110); and applying sufficient pressure responsive force to said piston area to move said valve element from said open position to said closed position (see column 1 lines 42-49 and column 8 lines 43-46, wherein the anchor is responsive to fluid pressure, which in turn closes the valve port 110).

With respect to claim 20, Baker discloses that a valve element defines a lock recess (see figure 1) and a lock member is retained (122) within said by-pass valve body and enters said lock recess when said valve element reaches said closed position (see figure 1), said method comprising: causing pressure responsive movement of said valve element toward said closed position and positioning said lock recess in registry with said lock member (see column 1 lines 42-49 and column 8 lines 43-46, wherein the anchor is responsive to fluid pressure, which in turn closes the valve port 110); and moving a portion of said lock member into said lock recess and causing said lock member to retain said valve element at said closed position (see figure 1).

With respect to claim 21, Baker discloses at least one packer element for sealing within the well casing of a well (D), permitting by-pass of well fluid past the packer element of the well treatment tool during conveyance of the well treatment tool within the well casing (see column 10 lines 38-42), comprising: a by-pass valve housing (see figure 1) being connected with a well tool and defining an internal flow passage in communication with a tubing string and having at least one by-pass port (110) establishing communication of the internal flow passage with an annulus between said by-pass valve housing and the well casing (see figures 1 and 4), said by-pass valve housing defining an annular internal valve receptacle and an annular internal valve seat (see figures 1 and 4); a tubular valve element being moveable within said annular internal valve receptacle between an open position (see figure 4) permitting flow of well fluid through said at least one by-pass port (110) and a closed position (see figure 1) establishing sealing (112) with said annular internal valve seat and blocking the flow of well fluid through said at least one by-pass port and permitting the flow of fluid through said internal flow passage; at least one shear element (122) being mounted to said by-pass valve housing and having retaining engagement (122) with said tubular valve element and securing said valve element at said open position permitting fluid by-pass during tool running and being sheared and releasing said valve element for closing movement responsive to predetermined fluid pressure (see column 1 lines 42-49 and column 8 lines 43-46, wherein the anchor is responsive to fluid pressure, which in turn closes the valve port 110).

With respect to claim 24, Baker discloses a by-pass valve housing defining an internal housing sealing surface (112) having a defined internal diameter (see figure 1); said annular valve seat having an internal seat surface having a diameter less than said defined internal diameter (see figure 1); and said tubular valve portion having a middle seal of a diameter (108) establishing sealing engagement only with said internal housing sealing surface and having a lower seal (112) of a diameter establishing sealing engagement only with said internal seat surface (see figure 1).

With respect to claim 25, Baker discloses an internal housing sealing surface (112) and said internal seat surface each being of cylindrical configuration and being of differing diameters (see figures 1 and 4); and said lower seal (112) being spaced from said internal housing sealing surface (see figures 1 and 4) and establishing sealing engagement with said internal seat surface (see figures 1 and 4) preventing damage to said lower seal during movement of said sliding sleeve valve element to said closed position (wherein seal 112 would inherently prevent damage to said lower seal during movement of said sliding sleeve valve element).

With respect to claim 26, Baker discloses an annular valve seat defining an internal seat receptacle (see figures 1 and 4); and said tubular valve element defining a tubular valve member establishing sealed engagement within said internal seat receptacle at said closed position of said tubular valve element and blocking fluid flow through said at least one by-pass port (110) and permitting fluid flow through said tubular valve member (see figures 1 and 4).

With respect to claim 27, Baker discloses said by-pass valve housing defining an internal piston sealing surface (see figures 1 and 4); said tubular sleeve valve element having an annular piston seal disposed in sealing engagement (112) with said piston sealing surface and defining a pressure responsive area (see figures 1 and 4); and fluid pressure within said flow passage acting on said pressure responsive area and developing a resultant force urging said tubular sleeve valve element toward said closed position thereof (see column 1 lines 42-49 and column 8 lines 43-46, wherein the anchor is responsive to fluid pressure, which in turn closes the valve port 110); and fluid pressure within said flow passage acting on said pressure responsive area and maintaining said tubular sleeve valve element at said closed position once valve closure has occurred (see figure 1).

With respect to claim 28, Baker discloses a by-pass valve housing having upper and lower housing subs being releasably connected and defining an annular chamber having a generally cylindrical piston sealing surface (see figure 1); said tubular sleeve valve element having an annular piston seal (112) disposed in sealing engagement with said piston sealing surface (see figure 1); and an upper seal element (107) and a middle seal element (108) establishing sealing between said tubular sleeve valve element and said upper and lower housing subs on opposing sides of said annular piston seal and being of substantially equal sealing diameter (see figure 1).

With respect to claim 29, Baker discloses an annular piston seal (112) engaging said generally cylindrical piston sealing surface defining said pressure responsive area of said tubular sleeve valve element (see figure 1); and at least one pressure port (110)

being defined in said by-pass valve housing and communicating annulus pressure externally of said by-pass valve housing to said pressure responsive area of said sleeve valve element (see figures 1 and 4) and said annulus pressure and tubing pressure developing a pressure responsive force urging said tubular sleeve valve element toward said closed position thereof (see column 1 lines 42-49 and column 8 lines 43-46, wherein the anchor is responsive to fluid pressure, which in turn closes the valve port 110).

With respect to claim 30, Baker discloses a by-pass valve housing and said tubular sleeve valve element defining a sealed variable volume atmospheric chamber therebetween (see figure 1); and air present within said sealed atmospheric chamber being compressed by decreasing volume of said variable volume atmospheric chamber during closing movement of said tubular sleeve valve element and cushioning closing movement thereof (wherein when the valve element is closed the air would inherently be compressed).

With respect to claim 31, Baker discloses a test pressure control mechanism (115, 122) being present within said by-pass valve housing (see figure 1) and permitting application of predetermined maximum test pressure to the well without causing shearing of said at least one shear element (122).

4. Claims 2, 3, 17, 18, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baker.

Baker does not specifically disclose tubing pressure or hydrostatic pressure. However, these are well known types of pressure in the art. Thus, it would have been obvious to modify Baker so that the predetermined fluid pressure includes tubing pressure or hydrostatic pressure as is well known in the art.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicole Coy whose telephone number is 571-272-5405. The examiner can normally be reached on M-F 8:00-5:30, 1st F off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

nac

William Neuder
Primary Examiner